

Abstract of the Invention

5 An accurate speech recognition system operable for hand-held devices having relatively low computational power and memory requirements, low power consumption, simple operating systems, low weight and low cost. This invention provides accurate speech recognition for electronic devices with low processing power and limited memory storage capability. Basic accuracy is achieved by the utilization of specialized and/or individualized dictionary databases comprising several thousand words appropriate for specific uses such as website locating and professional/commercial lexicons. Further
10 accuracy is achieved by first recognizing individual words and then matching aggregations of those words with word string databases. Still further accuracy is achieved by the use of processors and databases that are located at the telecommunications sites. Almost total accuracy is achieved by a scrolling selection system of candidate words. The invention comprises a microphone and a front-end signal processor disposed in the mobile communication device having a display. A word and word string database, a word and word string similarity comparator for comparing the speech input word and word string pronunciations in the databases, and a selector for selecting a sequence of associations between the input speech and the words and word strings in their respective databases, are disposed in servers at network communications sites. The selected words and word strings are transmitted to the
15 mobile communication device display for displaying the selected words and word strings for confirmation by scrolling, highlighting, and final selecting and transmission. The invention is particularly applicable for mobile wireless Internet communications.